Default and Delete Keywords Solutions

Copyright © James Raynard 2021

Defaulted member functions

- What does the "default" keyword do?
  - By putting "= default" after a special member function declaration, we force the compile to synthesize that member function
- Why is it useful?
  - It saves having to write out the code for the member function. (Consider the default copy constructor for a class with a lot of data members)
  - The member function is generated each time the class's code is compiled, so it is always correct and always up to date
  - It makes it explicit that the programmer wanted a default version of that special member function (as opposed to forgetting to implement it)
- Can it be used with non-member functions?
  - No

Copyright © James Raynard 2021

Deleted member functions

- What does the "delete" keyword do?
  - It causes the compiler to mark the function as uncallable
  - If we try to call the function, we get a compiler error
- Why is it useful?
  - It can be used to prevent operations we do not wish to allow
  - e.g. we can make objects uncopyable by deleting the copy constructor
- Can it be used with non-member functions?
  - Yes

Copyright © James Raynard 2021

Making a class uncopyable

- Write a simple class which cannot be copied or assigned to
  - Using Traditional C++ features
  - Using Modern C++ features
- Write programs to test your classes

Copyright © James Raynard 2021